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**THIS
MONTH**

- Motion Pictures On Tape
- Trick Effects In TV Commercial Films
- The Making Of A Prize-winning Film

DECEMBER

1951



PHOTO BY FRANK THORNTON

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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

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ON THE COVER

THE GREATEST SHOW ON EARTH was also the greatest camera assignment for George Barron, A.S.C. Here, the Technicolor camera hovered on the roof of lions in background inside story action, which was interrupted with a regular performance of the Ringling Brothers & Barnum and Bailey circus. Producer-director is Cecil B. DeMille.—Photo courtesy Paramount Pictures Corp.

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Hollywood Bulletin Board



DECISION FILM selected by Academy of Motion Picture Arts and Sciences for its November Film Forum was 12th-Fox's "Decision Before Dawn," photographed by Frank Pinnau, A.S.C. Featured above is panel supervising production crew. Left to right: Frank Pinnau, Doncho Samson, film editor; Frank McCortney, producer; Anatole Litvak, director; Wm. Hollibaugh, mechanical effects; Saul Harwood, art director; Frank Waxman, music; and Roger Emsen, sound. Mel Ferrer acted as moderator.

Elected to the Board of Directors of the American Society of Cinematographers last month were Robert deGruise and Sol Polito. New Alternate Board Members are Ernest Lassie, Nicholas Massman and Joseph Ruttenberg. Executive vice-president, Fred W. Jackman, has announced that the Society's next annual election of officers will take place in April, 1955.

Membership in the Academy of Motion Picture Arts and Sciences will close temporarily on December 1st, and will not be reopened until after the first meeting of the Academy following its Annual Awards presentation next March. President Charles Brackett asks that present members wishing to sponsor new members must have the names presented before the Academy's Board of Governors at their next monthly meeting scheduled for early December.

Sylvia M. Ross, last month was elected to the Board of Directors of Kinevox, Inc., as Secretary-Treasurer. President and Technical Director of the company is Len Ross, A.S.C. The company manufactures the Kinevox synchronous magnetic film recorder and a wide range of associated equipment for use in motion picture production.

20th Century-Fox's new color film and the laboratory equipment used in processing it was demonstrated before members of the A.S.C. last month at the stu-

dio's Western Avenue projection room. On hand to describe the process and answer questions were Sol Halprin, Studio's camera department and film laboratory head; Earl Sponsable, head of 20th's research and development division in New York City; and John Capstaff, Eastman Kodak Company research engineer.

Employing the new Eastman Kenticolor color film, the Fox development is aimed at giving the company its own studio-controlled color film production system. The negative requires no special camera, may be used same as any black-and-white film.

Demonstration reels of test footage of the new color film were screened during the session and later those attending were given a look at the new processing equipment which Fox recently built for handling the film. The studio hopes to start the first production using the new color film sometime next spring.

Ralph Hoge, head of Thomas Rentals in Hollywood, will shortly announce a new development in camera lenses which reportedly achieves remarkable depth of focus. Unlike other lenses which have been developed for a similar purpose, the Hoge lens is simpler and said to render better pictorial results. Lee Garmes, A.S.C., used the lens on a feature film production for the first time when photographing Aspen Productions' "The Tightrope," completed last month.



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WHAT'S NEW

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MICOP CONTINUOUS PRINTER—S.O.S. Camera Supply Corp., 602 West 52nd St., N. Y. City announces they have been appointed U.S. distributor of the Micop continuous film printer manufactured in Holland. The equipment is



ideal for microfilmers, TV and industrial film producers, schools and colleges.

Available for either 16mm or 35mm film, printing speed of the Micop is 25 to 35 ft. per minute. S.O.S. is also making available a high speed Micop with 90 ft. per minute capacity. This model is similar to the 1st model except for its higher powered lamp, blower cooling, and 1200 ft. flanges. Prices of Micop printers start at \$995.00. Complete descriptive data is available from the distributor.

NEW "MART ADDRESS"—The Camera Mart, Inc., New York City, moves to new and larger quarters December 1st. New address will be 1815 Broadway. New location gives Camera Mart greatly increased display space in addition to larger storeroom, repair and equipment servicing quarters. The company is one of the largest distributors of motion picture and TV production equipment on the east coast; also conducts an extensive rental service.

TITLES AND OPTICAL EFFECTS—Ray Mercer & Company, 4241 Normal Ave., Hollywood, have expanded facilities to service TV film producers with optical effects and titles. One of the oldest established firms in the business, the company has been supplying optical effects and titles to Hollywood's independent and major producers for more than 20 years. Company also services clients in the TV industrial and feature film in-

dustries in other centers of the U.S. Titles and effects for the award-winning TV film show, "Firestorm Theatre" were produced by Ray Mercer & Co., whose facilities include complete sound stage, title printing and photographing equipment, and some of the most evocative optical effects equipment ever designed. The company also manufactures a processing rule for film editors that gives various frame counts in terms of latent feet for 8mm, 16mm and 35mm film.

NEW ANSCO PROCESSING LAB—Anso announces it has opened a new processing laboratory for servicing movie makers using its 8mm and 16mm color films. New plant is located at 2259 Vaux Hall Road, Union, New Jersey. New laboratory boasts one of the fastest 16mm color processing machines in use today. Within 24 to 48 hours from time customer's Anso Color movie films reach the laboratory, they are processed and on the way back to the customer. Anso emphasizes that its sheet, roll and 35mm magazine color film will continue to be processed at Binghamton, N. Y., as before.

SOUND PROJECTOR BOOKLET—Now available from Eastman Kodak Company, Rochester, N. Y. is a comprehensive booklet describing the features of Kodascope Pagam Sound projector and its use in audio-visual fields.



WIDE ANGLE LENS FOR EIGHTS—Bell & Howell Company, Chicago, announces a new wide angle lens for 8mm cameras. The 6.5mm (¼") f/1.9 lens admits 70% more light at full aperture than the ¼" f/2.5 lens with Wide attachment. Special features of lens are: click stops, drop-in filter ring, and chrome plated mount. Aperture range is from f/1.9 to f/22. Price is \$79.95.

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1952

Amateur Motion Picture Competition

Closing Date For
Entries — March 1, 1952

SPONSORED jointly by American Cinematographer and American Society of Cinematographers to select the "Top Ten" amateur films of 1951-52. Open to all amateur movie makers residing within the continental United States and its possessions.

ELIGIBLE for entry are 16mm and 8mm amateur-made films regardless of subject, either black-and-white or color, silent or with sound on film.

AWARDS—The first ten films with highest rating in the judging will receive gold American Cinematographer Trophies. The ten next best will receive Honorable Mention certificates.

RULES

- Entries must be wholly amateur-produced.
- All sound films must be wholly amateur-recorded, regardless of sound medium used.
- Film length maximum of 100 feet for 16mm sound or silent entries. 8mm entries 400 ft.
- Sound medium (sound, tape, record) must accompany film in same package.
- Entrants must pay transportation on films and sound records both ways.
- No film should be submitted before December 1, 1951. Both reels and final cut leaders, and captions of sound medium must bear initials indicating name and address of entrant.
- Entry blanks must be submitted in advance.

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KEEPING UP WITH *Photography*

ANY PHOTOGRAPHER who takes color pictures and often wonders why a very carefully determined exposure doesn't come up with perfect results will find the answer in a new method of exposure index determination for reversible photographic materials which has been developed by H. G. Morse of Ansco, Binghamton, N.Y.

In black-and-white photography, according to Morse, where a negative is made and then a print from this negative, the practice has been to "expose for the shadows and develop for the highlights."

With reversible films, such as 35mm and 16mm motion picture color films, 35mm and mill color films, proper exposure presents quite a problem. With such materials, the negative and positive images are created from the same emulsion, and processing is generally not variable. Exposure of the film in the camera determines the final quality of the image.

Since the image must be judged on its overall density, and at the same time its highlights must be relatively clear for the best brilliance and projecting characteristics it has been found advantageous, according to Mr. Morse, to have exposure index not on shadow values but rather on medium highlight values. According to Morse, no exposure index has yet been developed for best exposure determination of reversible films. The best bet for anyone shooting pictures on such film is to aim for medium highlights for best overall results.

HIGH-SPEED PROCESSING of motion picture film, developed by Eastman Kodak Research Laboratories, was demonstrated before a recent Photographic Society of America convention audience. During the convention, visitors were photographed in action with an ordinary 16mm cine camera. The film was then rushed to a rapid-processing machine. Here, through the magic of "hot processing," using heated chemical solutions, the film was developed, washed, dried and ready for projection in a matter of minutes. During the processing, a single frame of 16mm film moves through the machine in about 60 seconds.

Secret of the high-speed processing lies in the use of photo solutions heated to about 125 degrees F. When the film moves from special quick drying drums, it is ready for projection. The

new processing method is now serving the armed forces, television, and has long been in use at race tracks as a check on the fading claims of riders, etc.

PICTURES OF GREATER SHARPNESS to the eye will ultimately come from new photographic materials as a result of a highly technical photographic investigation recently announced by the Kodak Research Laboratories in Rochester, N.Y.

Research on the way the human eye sees a picture, plus study of the physical structure of the photographic image, changes the generally accepted belief that resolving power can be used to rank photo materials in the same order of sharpness as visual judgment of pictures. The Laboratory marked as a milestone view that, in general, high resolving power is a photo material means sharpness in the final picture.

Kodak scientists and their discovery provides photographic researchers with an important tool for further investigation of photographic materials.

THE BRIGHTEST CADMIUM mercury vapor lamp ever made in the U.S. — a 10,000 watt catalogue of quite the length of a salted peanut has been developed by Westinghouse Electric Corp. engineers for possible use in motion picture art illumination. The high brilliance of the short-arc lamp and its cool light of near-daylight color should qualify it for both spotlight and floodlight service in motion picture studios, according to Westinghouse engineers.

The lamp, described as an "instant starting source of high brightness electronic light," operates on an auxiliary circuit that makes possible instant re-starting at peak brilliance.

SPONTANEOUS IGNITION of cellulose nitrate motion picture film can occur when such film is in an advanced stage of decomposition, according to research recently concluded by the National Bureau of Standards. Until recently, it was generally believed that nitrate film would not ignite spontaneously at temperatures ordinarily encountered in a film vault.

In eastern cities during the abnormally hot summer of 1949, numerous fires occurred involving nitrate motion picture films. The Bureau instituted in-

(Continued on Page 60)

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KEEPING UP WITH PHOTOGRAPHY

(Continued from Page 480)

vestigation of spontaneous ignition as an inherent hazard with nitrate film. Samples in various stages of decomposition were supplied for the purpose of simulating conditions which may have prevailed at the fire locations. Stored in a special chamber, with controlled and recorded temperatures, each film was packed in an individual can which was in turn wrapped in asbestos wool to retain the heat of the exothermic decomposition reaction.

Results obtained in the NBS tests indicate that good film does not self-ignite at ordinary storage temperatures; that the logical approach to safe storage is the removal of all film showing signs of decomposition. Decomposed film in the first and second stages is photographically reproducible. When the subject matter is important, the film can be copied and the original destroyed. Where decomposing film is not valuable, it should be destroyed at once. This may be done by submerging it immediately in water-filled drums, then removed and destroyed by burning in the open.

AN 8MM HIGH SPEED motion picture camera has been developed by the Wellesch Optical Company, Rochester, N. Y., capable of speeds of 25,000 frames per minute.

A COLLECTION of 238 exposure meters and exposure calculators of all known types is now a part of the photographic equipment display of the George Eastman House, Rochester, New York. The collection was accumulated by the late Joseph Burg, prominent New York consulting engineer and internationally-known amateur photographer.

The first attempts to determine exposure were by reference to past experience. Ingenious slide rules and tables put together the varying factors which influenced exposure—such as condition of the light at various altitudes, seasons and time of day.

The first meters to measure the amount of light made use of photoconductive material, usually a piece of photographic paper. The time required for the paper to darken to the shade of a standard test was integrated on a slide rule with the other factors. This type "meter" was widely used about 1900.

Next in development was the extinction type meter, the photoelectric meter which measures reflected light, and more recently, the incident light meter.

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RIGHT UP in a canvas boom, above the camera, filming camera angles for scenes in "The Greatest Show On Earth," are director Cecil B. DeMille, scripter Louisiana Post 161, and cinematographer George Barnes, A.S.C.

Filming The Circus

Technicolor's new low-level color film plus Paramount's remote control incandescent lighting system eased the way for George Barnes in photographing Cecil B. DeMille's "The Greatest Show On Earth," saga of circus life.

By ARTHUR ROWAN

THE MINDS of Cecil B. DeMille and the Ringling Brothers & Barnum and Bailey circus is a reasonable product of an age which has yielded the atom bomb. Both are plants of showmanship and both have had a tremendous influence on American life. Paramount studio brought the two forces together in Hollywood two years ago when it paid a handsome price for the right to use the circus' name and equipment for what is perhaps its greatest production, *The Greatest Show On Earth*.

From the beginning, one thing was fairly certain. DeMille was not interested in doing a history of the circus, although some of it enters the script in incidentally. Said he: "The circus on tour

is a rich American heritage, a modern odyssey of people and of the lives of peoples. Of spectators, too. It is our aim to put that odyssey on a canvas of film, to capture the thrills of the circus, its tragedy and humor and, if luck is with us, its universal soul."

When the "Carnegie Special" trained out of Hollywood last January 24 for *The Greatest Show On Earth* location at Sarasota, Florida, it carried one of the largest troupes ever assembled at Paramount. A month's shooting schedule was set for Sarasota, winter quarters of the Ringling Brothers & Barnum and Bailey circus, setting of the picture.

For DeMille and some of the production staff, this was not the first circus

trick. A year earlier, DeMille and director of photography George Barnes, A.S.C., visited the circus quarters at Sarasota at which time they explored all the problems they might encounter in photographing the production. Problems not ordinarily met on normal locations nor in the studio confronted them—the most formidable, that of lighting. Because the laws of most states now prohibit use of any open flame type lamp inside a circus or carnival tent, this meant no arcs could be used—that the whole vast tent interior would have to be lit with incandescent lamps. This looked like a discouraging situation until the problem was referred to studio engineers back in Hollywood.

It so happened that at the same time another factor was working in the studio's favor. For some months, Technicolor Corporation had been working on a new low light-level color film which would make possible shooting Technicolor productions entirely with incandescent lighting. They were prevailed



THE CAMERA invisibly was mounted in a boom for every shot made inside the canvas tent. The big problem always was to keep the camera and equipment from obscuring view of the spectacle. An idea of the lighting achieved is also apparent here.

upon to make this new film available for *The Greatest Show On Earth*, the first major production incidentally in which it was used.

With Technicolor's engineers and those of Paramount studio now solidly united toward a common goal of making DeMille's epic picture possible, the company settled down to solving other production problems and getting the picture rolling.

At Paramount studio, Loren Ryder's engineering staff had developed a system of remote control lighting and a new light-weight lamp unit designed especially for the system. These were described in the November issue of *American Cinematographer*. The company was resolute in placing lights on the quarter poles around the circus rings, but they couldn't send men up the poles each time the position or angle of the lights had to be changed. The answer was a method of remote control, and the method evolved worked perfectly.

"Another important consideration," said cameraman Barnes, "was that all studio lighting units had to go up on the poles first—showed of the circus lights. This meant our lighting crew had to work fast, integrating its work with that of the circus workers, so that we interfered as little as possible with the business of erecting or striking the tent."

No other color production made by a Hollywood studio posed the lighting problems faced by Barnes in photographing this picture. The biggest problem was light—volume of light. Consider a huge circus tent—a brand new circus tent, navy blue in color—and the fact the entire interior had to be lit during the shooting of most scenes, and you'll visualize what a demand this placed on cameraman and lighting crew.

Once the studio had perfected its new light-weight 5-KW lamp unit, it went into immediate production with it; and by the time the company was ready to begin shooting at Sarasota, there were ample units on hand to fill the lighting demand. This lamp, together with its remote control mechanism, has a total weight of only 32 pounds. The average 5-KW lamp weighs between 60 and 80 pounds. Fifty of the new units were supplied George Barnes for use in lighting the circus interior. The lamps were erected on the quarter poles in clusters of four, and were operable independently—that is, they could be lit or extinguished, tilted and panned individually from a remote control panel on the ground. The method of securing the lamps on the quarter poles was so simplified that they could be hoisted and laced in place in a matter of minutes. Incidentally, there was no color tem-

perature problems because CP lamp globes were used entirely for lighting.

"Technically," Barnes said, "the production of *Greatest Show On Earth* proved as tough as a river's horn from lighting to meshing of schedules. We found that a circus must be lighted differently. The camera most of the time was shooting skyward—to catch aerial artists—a forbidden position where overhead lights are involved. With possibly one or two exceptions, we used no lights on the floor—in fact most of the time we couldn't, successfully. So our lighting had to be done with the remote-controlled overhead light units. Because these units also could be adjusted from full flood to spot, it was possible to obtain a wide range of lighting from a single unit, making it unnecessary for us to carry along several types of units. When we had to shoot Betty Hutton doing her trapeze act, we made the long shots during an actual show, with the audience in the background. In photographing such scenes, every one of the fifty 5-KW lamps would be lit. Some would be throwing light on the audience, some on the circus floor, while a few would be tilted to



LIGHTING was complicated by the fact that the camera had to look skyward in shooting much of the action. Here Betty Hutton performs on the trapeze for an important scene in the picture.



ONE OF THE two down-on-the-ground camera groups used in filming action during an actual circus performance at Sarasota, Fla. Doubtless, in foreground lamp on pole on the picture. Jimmy Stewart, dressed as circus, is an interested spectator on the sidelines.

light Miss Hutton.

"Closeups and intermediate shots of aerial action were made at Sarasota before the Big Show took to the road, or were made mornings when the show was on the road, before the public was admitted to the big top."

The studio supplied its own power for the lights. These include gasoline-powered generators were shipped to Florida for this purpose and the generators went along with the show once

it took to the road. The company put in seven weeks shooting scenes at Sarasota. While the winter quarters afforded ideal opportunity to film much of the picture unhampered by circus schedules and crowds of people, there was much of the action laid in real circus performances that demanded shooting with regular audiences for backgrounds and atmosphere.

"Here again we went fast by the (Continued on Page 122)



TOBY OREARY FLOWERS, some having blossoms less than a 10th of an inch in diameter, are photographed by a Moody Bible Institute cameraman for a "Sermons From Science" film.



MOON of the Institute's film studios are of plant growth or insect activities, for which time-lapse photography is employed.



MOON is filming and hydrophone sound recording of deep sea fish, giving fish as have a language of their own.

Science Films For Sermons

Moody Bible Institute productions had beginning in the amateur movies of Dr. Irwin A. Moon. Today, "Sermons From Science" films are screened the world over.

By ARTHUR L. MARBLE

SOME OF the most intriguing cinematography seen today appears in the 16mm color films produced by the Moody Institute of Science by a little known group in a modest studio not far from Hollywood. Purpose of the films is to bring to non-theatrical audiences little-known wonders of nature to point up the fact they were created by a divine power.

Head of the Moody film production unit is Dr. Irwin A. Moon, an enthusiastic former amateur movie maker and one-time preacher, whose scientific interests have led him into a wide variety of adventures with a movie camera, such as making sound film recordings of deep sea fish for *Voice Of The Deep*, or going aloft with his camera in a P-51 to film a rain-making project for *Hidden Treasures*.

Prints of Moody science films have been made in 13 languages, and have been screened in all parts of the world. They are a favorite among the men in

our armed forces, not only because of their technical excellence and subject matter, but because they combine and present in non-sectarian manner two subjects of universal interest—science and religion. The film production activities of the Moody Institute of Science are sponsored by the parent organization in Chicago, Moody Bible Institute, which trains religious leaders and missionaries for various Protestant and Jewish churches.

Headed in a three-story former Masonic Temple in West Los Angeles, the Moody film studios resemble a modern scientific laboratory. Here is all the equipment—both scientific and photographic—used by the institute to photo-

(Continued on Page 530)



DR. IRWIN A. MOON, in doctor's suit, prepares to submerge to photograph life in ocean's depths.



EIGHT-inch-dia built-up camera drum makes possible production of motion pictures equaling the best of the professional studios.

THIS ARTICLE that begins on this page is the first in a series written by members of the Screen Producers' Guild in Hollywood, and dealing with the producer's view of film making. While the editorial content of *American Cinematographer* customarily is devoted to the photography of motion pictures, there is increasing evidence that more and more of our readers are vitally interested also in topics dealing with other phases of film production.

For them we hope this series will prove of substantial value. The articles bring to the film maker not only the viewpoints of the producers but reveal a great deal of pre-production planning and activity that precedes actual photography of a picture; and while all this is related to the production of professional films, what Hollywood producers have to tell about their side of the business should prove highly educational for the cinematographer—amateur as well as professional.

The author, Charles Brackett, is President of the Academy of Motion Picture Arts and Sciences, and a member of the Board of the Screen Producers' Guild. Famous for his production of such pictures as *The Lost Weekend*, *To Each His Own*, and *Sunset Boulevard*, he is now producing and writing at 20th Century-Fox Studio—STATION.



"AS WE WENT along with *'Sunset Boulevard'*, our composition became deeply involved with the writers who had been given the brush by Henry Wallace Fox. At the end, we had to give her the only happiness we could see for her—the twilight happiness of the end."

Putting The Picture On Paper

The process of screen writing cannot be driven too hard. It's up to a producer to find writers who, besides knowing their job, are honest and conscientious—for his picture's success depends on what they set down on paper.

By CHARLES BRACKETT

THE producer has been set. It has been determined that a certain novel or play or screen original or idea is strong enough to bear the weight of twelve reels of celluloid. Then comes putting it down on paper.

In speaking of every step down the long line of picture-making, I'm sure my confreres are saying "Here's the place not to economize—here's the spot to shoot the works!" About putting it down on paper, I make that statement with the deepest conviction.

There is a story about the early days of picture-making—a nightmare story for writers. A producer had just hired a writer. He gave him a brand new pencil, looked at him with pleading eyes and said, indicating an inch-long stub of pencil, "Toughed down to here?"

The process of writing cannot be driven too hard. It's up to a producer to find that his writers, besides knowing their job, are honest and conscientious. His picture depends on what they set down on paper—"The jokes," as the pages are called, rather grimly, in the studio. Writing is concentration—and if inelegant minds don't concentrate on the picture at this stage, you're going to have nothing.

We producers have been urged to get down to actual cases in this series, to

tie up our remarks with pictures you readers have seen and with actual experiences. Therefore, shucking aside all reticence, I'll confine myself to the experience of the writer I know best—me.

As a screen writer, I've never worked alone, and I'm going to discuss the methods of writing scripts Billy Wilder and I used for many years, and which Walter Reisch and Richard Brown and I now use.

That method begins with talk—seemingly endless talk—but all of it directed towards the project. Any story can go in a lot of directions. You have to explore the ones which appeal to you, before you find the one you are going to use. Usually you find yourself with com-

plete outlines for several pictures before you make your final choice. There's one scene you love in one version—another in another version. Can they be reconciled? If not, one of them has to go. It has to be jettisoned completely, not to blur the new line I call this talking part of the job of filling up the reservoir, and the reservoir should be full to the top before writing begins.

During the talk, the characters have been getting clearer. The only reliable peg I know on which to hang a story is a character. If you can get a central character with real blood in his veins, and strong desires and a pair of feet that really walk the earth, you've got a picture. If you can get such a character

(Continued on Page 530)

Double Exposure

What happens when a first cameraman works under a director who once was a cameraman himself.

By CHARLES WEBB

TO THE LANDIAK, the embarrassment that a director of photography had been assigned to work under a director who at one time had held that job himself, would mean a situation fraught with rooster coddles.

That was the spot in which Charles "Buddy" Lawton, Jr., A.S.C., found himself when he was assigned as first cameraman on Columbia's *Pasha*, starring Loretta Young. He was doubly exposed, first to the usual vicissitudes of getting the action and mood of the drama properly on celluloid, and second to working under a man who knew as much of the technical side of photography as he did Rudy Mate was to be the director, one of the very few members of the American Society of Cinematographers who ever have forsaken their cameras for a megaphone.

Mate is the product of the silent days of picture-making in Europe. More recently, as cameraman, he has filmed many of the Bita Haysworth stars, including *Cover Girl* and *Gilda*. His last directorial effort, *When Worlds Collide*, is currently running in London and is said to be the city's biggest hit in ten years.

Lawton has been at Columbia seven years and in that time has been director of photography on twenty-five films, most of them top budget releases. Like Mate, he, too, has photographed Bita Haysworth, in *Lady From Shanghai*. His last prior to *Pasha* was *Roots Melrose*, starring William Holden.

With that setup, even the initiated might surmise that anything could happen. Temperaments could clash no matter



TWO of the industry's top right cameramen contributed to the success of Columbia Pictures' "Pasha"—Charles Lawton, Jr. (right) who directed the photography, and Rudy Mate (left) who directed the picture. Star of "Pasha" Loretta Young (shown here watching proceedings on the set).

how careful each man might be to avoid it. That they didn't is a tribute to both the ability and the stability of each man.

Having exposed what the layman might think of the situation, what did each one of these workers think?

Says Lawton, "Although in the broader sense, first cameramen of necessity must follow a certain routine procedure, still, every one of us has developed his own way of doing things. I've known Rudy well over the years. He's a fine fellow, a great cameraman and director. However, I suppose it was only natural for me to wonder a little if my work was going to please him, dovetail with his ideas and

(Continued on Page 512)



ONE REASON Mate and Lawton proved to be such a cooperative team during the filming of "Pasha" is the fact that they both held many production credits before actual filming began.



"RIGHT FROM the start," says Lawton, "Mate and I were in perfect accord about how the camera and lighting should express the mood of this human, emotional drama."

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CO-DEVELOPERS of a new electronic device that makes possible the recording of motion pictures on tape like a record recording are Wayne R. Johnson (left) and John T. Mullin. They're looking at an ordinary television tube by which the picture is recorded. System was shown in press in Hollywood recently. (Arlene Thompson)

Motion Pictures On Tape

Magnetically recorded motion pictures, demonstrated publicly in Hollywood for first time, promise big changes in the production of TV and feature films.

By FREDERICK FOSTER

THE PRODUCTION of motion picture images on magnetic tape is a subject which you will be hearing and reading about a great deal from now on. Some idea of its possible impact on the motion picture industry is contained in an editorial on the subject by W. R. Wilkerson in his trade paper, *Hollywood Reporter*, for November 15th, part of which follows here:

"Want to do a little guessing on the TV-motion picture problem as it pertains to production, distribution and exhibition?"

"Here's a picture of things to come, part of which is already past the experimental stage, the remainder to be put on the planning boards before another year rolls by."

"In the not too distant future, theaters all over the world will be able to turn on a switch and receive their picture programs, via closed air waves, broadcast direct to their screens from

the production stages here in Hollywood, a main broadcasting plant elsewhere, or many others in important distribution sections.

"There won't be any projection booths, there won't be any film exchanges with their shipping departments and film examinations because there won't be any film. The motion pictures of tomorrow will be on tape and the exhibitor will get his shows, not out of cans via American Express, but from the ether waves. Instead of running a single picture for a day or week or longer, he will have a different picture every two or three hours and every theater within his part of the country will be running the same program."

"Sounds fantastic, doesn't it? Half of it's guess, the other half real."

"Tape recording of sound and images is already here, it's just a question of perfecting the medium. Once that's per-

fected, it's then only a question of working out the details of closed circuits for TV and tying up the theatres, which will, of course, eliminate quite a few, and get them equipped for the reception of their pictures over the air to complete the whole scientific revolution."

The production of motion pictures on magnetic tape, about which Mr. Wilkerson wrote, moved a step nearer to reality last month, when Bing Crosby Enterprises, Inc., in Hollywood demonstrated for the press its electronic filming system. This is a method by which both picture and sound are recorded magnetically on tape for motion picture studios and television. At present, the Crosby development is concerned mainly with its application to television—a business in which Crosby Enterprises is already pretty well established, using conventional motion picture methods.

In the demonstration, a new magnetic recording head capable of absorbing pictures, sound and color on a single plastic tape, took pictures off a home television receiver of a motion picture film being televised. The head transferred the images onto a quarter-inch magnetic tape for rebroadcast later. Images in the rebroadcast were fuzzy but comparable to results obtained with early TV receivers.

The inventors, John T. Mullin and Wayne R. Johnson, who developed the new magnetic recording head under the supervision of Frank Healy, head of Bing Crosby Enterprises' electronics di-

(Continued on Page 517)



THE BRAIN or "nose" of the electronic device is compared in size with a half-dollar. Its operation is used in the new electronic "system."

VERSATILE PERFORMERS



THE MODEL T FORM RECORDING SPECIAL SYSTEM AND BALANCEMETER. A sensitive light metering unit for recording sound, as photographed in open studio film, as picture is exposed according to open gate (picture area recording lens).



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Trick Effects In TV Commercial Films

Video spots benefit from those cinematic techniques that compress compelling action fully and effectively within the limited time allotted television commercials.

By JOHN H. BATTISON

Author of "Movie For TV"

THE FORMAT of the short television commercial film differs from that of the theatrical film mainly in that the whole object of the film is to promote or sell a product or service, frequently by repetitious presentation of its image. The object, of course, is to plant in the mind of the viewer both the trade-name and utility of the product quickly and impressively. True and corny clichés must be avoided, and almost any visual demonstration can become a cliché as must exaggeration. There must be a measure of entertainment or educational value in the TV spot film—yet not to the extent that the viewer is so busy enjoying the presentation that he forgets the product, and more—no buy it!

As a general rule, therefore, TV commercials are more effective as well as cheaper to produce if they are simple. Yet sometimes the briefest of commercial spots are the most difficult to

execute. One, which the author calls to mind, had to do with a popular brand hair dye and involved a "before and after" demonstration. Altogether it consisted of sixty seconds of film, opening and closing with animation, and with the live-action demonstration in between. The latter involved appearance of two women, one at a time, showing their hair while the narrator extolled the virtues of the dye. We used the split-screen technique in photographing the models—a matter which presented something of a problem. The presentation called for a grey-haired woman to appear on one side of the screen watching her "double" apply the product, which gradually transformed her grey hair into a beautiful lustrous dye job. The procedure had to be telescoped into the brief space of fourteen seconds.

Our first thought was to take the "transformation," using a pretty brunette

model for the model and powder her hair with zinc sulphide to give it the appearance of grey hair—then wash it out to give the appearance of dyed hair results. However, the client's insistence for complete honesty in the presentation as well as possible conflict with the Federal Trade Commission rules, precluded our following such procedure. So we sent out a call to the casting offices and tested models from more than a hundred talent agencies before we found the right woman for the part—grey-haired and willing to undertake the dye transformation.

We had to be particular both as to model and the dyeing procedure, since the preliminary takes of the dye process had to be good. If they were not, we were in trouble because we couldn't "undo" the model's hair and begin all over again.

Readers may find interest in the manner in which we photographed these split-screen scenes. The camera setup is shown in the accompanying photo, and while much of the detail is obscured by the two men in the foreground, the photo shows the camera with a black cloth partially covering its main lens, and the large sunshade some distance in front of the camera one-half of which was masked off for the split-screen effect. The model is seated at the right, beneath the studio lights.

The camera was rigidly secured on a tripod to insure against even the slightest movement during filming. Ahead of it the large frame or sunshade was masked off across the diagonal of the opening with a large black card. This was very carefully aligned so that it cut off exactly one-half the picture frame. The "before" shots were made with the left side uncovered, and the "after" shots on the opposite side.

To complicate matters, the producer's script called for the camera to dolly out during the filming of the "before" shot, and to dolly in on opening the "after" shot. Because this would mean distur-



SETUP employed by author in photographing a hair dye demonstration for a TV spot, using split screen. Obscured by technicians in foreground is large frame screened by black cloth and housing a glass mask lens. Large black card in front masked one half of the frame area.

ing the rigid setting of the camera, an necessary to making the split stage shots in the camera, we resorted to the older name of "Malying" our subject. This was done by placing her on a chair mounted on a camera dolly, and having a grip move the dolly as required.

Although the "before" and "after" procedures were filmed split-frame, each procedure was photographed on a separate strip of film, then combined in the final printing to insure accuracy in matching up the two areas in the film frame. It would have been possible, of course, to shoot the two sequences on a single strip of film by using a camera provided with a masking slot behind the film. Our main reason for not following this method was to insure success of the production and avoid the necessity of having to do it over. In other words, were we to shoot the "before" sequence, then wind back the film and shoot the "after" action on the other side of the film frame, and that action was fubbed, we would then have to start all over again, beginning with the "before" sequence. The professional producer of commercials with his costly production time, simply cannot gamble with such methods even though they are measurably productive of success.

While we are on the subject of cosmetics for hair treatments, it is interesting to note still another innovation which we employed in the production of a spot announcement for a popular brand shampoo. We call it the "product wipe" and involves the old familiar wipe-off procedure briefly popular in professional films a decade ago. We simply made a thirty-two frame wipe with a bottle of the sponsor's product, wiping over the frame from left to right. The first scene showed hair dirty and dead. The scene following the wipe revealed the model's hair gleaming and smartly dressed after use of the sponsor's product. Optical effects such as this play a large part in the production of effective TV film commercials. END

ROLE OF MOTION PICTURES IN TELEVISION is reviewed in a recent issue of *Highlights*. Eastman Kodak publication for stockholders. The article states in part: "At least 30% of all TV programs now on the air are on film. This percentage, moreover, is rising as the advantages and methods of using films become better known."

"For 1951, TV will use an estimated 200 to 250 million feet of motion picture film. Most of this will be black-and-white 16mm film, the first 35mm . . . Interestingly, a number of producers are currently shooting TV films in color. These are printed in black and white for televising now. But, when needed, they'll be ready for use again on color telecasts."

Television Film Production

By LEIGH ALLEN

Donah Productions has returned to stand-by motion picture practice for photographing and editing the weekly *I Love Lucy* film for television, which is filmed by Karl Freund, A.S.C. Previously, the company employed a cutting system and a multiple camera setup.

Procter Syndications International is newly organized company which will syndicate film programs for television. Most portions of company's activities will be devoted to domestic and foreign distribution of film programs created by independent producers for television stations and local advertisers.

Andrew Jaeger, company V president stated that the future of film packages is being challenged by the problems of local TV stations. Their big needs are film packages of acceptable quality at realistic prices. Most of them can only by film properties, he says, if three sales departments actually have a sponsor ready to pay the freight of the package because of the high price structure.

The development of film packages which can be sold at a price which will enable the stations to buy them for rescheduling as well as commercial use is essential, Jaeger pointed out.

Stock shot footage—over 2,000,000 feet of it—is now available to producers of TV films. Ren Fiser & Associates, at Hal Roach Studios, recently acquired controlling interest in the Independent Film Library, and will make stock shot footage available to telefilm industry.

Official Films, originally reported in a TV film production loop with Jerry Fairbanks, reportedly has completed negotiations with Hal Roach, Jr., which will result in creation of the largest TV film production company in the country. Four shows are planned for immediate production.

The Film Industry has become an integral part of television, according to Frank Orme. Writing in the September issue of *TV*, Orme says that more than 100 television film producers are active in Hollywood at this time. "Next year," he says, "TV film production will be a \$100,000,000 baby." Millions of dollars have been made available for telefilm production with investors losing their confidence on the independent station market, he says. "Completely without cooperation from the major film companies a TV film industry has sprung up in Holly-

wood which is already producing a greater volume of film than in the entire theatrical film industry . . . Eventually every major film company will be in the television business."

The Association of Documentary and Television Film Camera-men has announced new wage scales now in effect, as follows: cameramen, \$62.50 per day, \$225 per week; soundmen, \$45.00 per day, \$150 per week; assistant sound men, \$20.00 daily, \$120 per week.

At least eight factors causing degradation of picture quality in time-recording for television have been identified by Radio Corporation of America technicians. Factors, which cause loss of detail, distortion of the gray scale rendition, and increase of noise or graininess in TV film are listed as faulty scene lighting, poor handling of the static camera, improper adjustment and maintenance of levels in the curvatures associated with the recording magnet, optical and mechanical losses introduced into the system by equipment components, and the film use and processing methods.

RCA believes little improvement in photographic processes can be expected under present conditions, but that an increase in kinescope brightness as the introduction of a new film emulsion might make changes in processing desirable.

Filmed commercials for the Red Skelton show are now being turned out by Donah Productions, with Karl Freund, A.S.C. at the camera. The commercials are virtually complete productions in themselves, running several minutes in the series, and have the same high directional and photographic quality that characterizes the *I Love Lucy* series of TV films, which Freund also produces for Philip Morris cigarettes.

TV Film Quality

Most film that is good for television use has employed a restricted scene brightness range. This does not mean "flat" studio lighting. All scene lighting used so effectively by Hollywood can and should be retained. But the ratio of that light to fill light must be reduced. Again it becomes a problem of fitting the scene into the final print densities which can be initially reproduced.

—Journal of S.M.P.T.E.

The Making Of A Prize-Winning Film

John Cowart, whose 'King Bookie' was a Top Ten winner last year, credits American Cinematographer articles for helping him along the road to success.

By JOHN FORBES

Photos courtesy Atlanta Journal-Constitution Magazine



COWART'S flair for dramatic lighting is shown in this shot of two of the bank robbers in "King Bookie"—one trying to hold a cigarette from the other who has double-crossed the gang and mistaken the money.



JOHN F. COWART, Atlanta amateur and winner of one of last year's Top Ten trophy awards in last year's American Cinematographer Amateur Movie Competition, used a Zeiss Ikon to film "King Bookie," 6-1/2-hour (shown black-and-white) thriller.

TRAINING HIS SIGHTS on his third American Cinematographer Award in a row is John Cowart of Atlanta, Georgia. If he accomplishes his aim, he will probably be the only amateur cinematographer on record who will have won three national awards with his first three amateur movies.

Cowart's first attempt at making movies was a pretentious drama running 600 feet in Meane black-and-white titled *Midnight Rendezvous*. He entered it in American Cinematographer's 1950 Amateur Motion Picture Competition and won an Honorable Mention certificate. When he commenced production of *Midnight Rendezvous* he didn't even own a cine camera. He rented one from a local camera store and prevailed upon his friends to act out the mystery drama which he had written himself.

Encouraged by the recognition his initial effort received, Cowart decided to make another picture for AC's 1951 competition. When the votes were tabulated by the panel of judges in American Cinematographer's competition last year, Cowart's film, *King Bookie*, was among the Top Ten receiving gold trophy awards.

King Bookie is a "John F. Cowart Production" all the way. It was authored by John Cowart, directed by John Cowart, photographed by John Cowart and edited by him.

When he set out to make *King Bookie*, Cowart resolved to enlist those of his friends capable of rendering the most professional acting performances. His first production had taught him that good acting is nine-tenths of the success of a dramatic amateur production.

Truman Haygood, Delta Air Lines statistician, assumed the role of *King Bookie*, an underworld boss. His ace gunman was Joe Wray, a teenager whose performance is equal to the best of any of the *Dead End Kids*. Olive Bell Davis, feature writer on a local newspaper, played the gun moll, and Bob Smith played an accomplice of Miss Davis in crossing up the bank robbers by stealing the money from them.

Despite the fact it's a gangster story, it's a very clean movie. The gangsters smoke a lot of cigarettes, look real

(Continued on Page 544)



SKILLFUL lighting again is demonstrated in this shot of the robbers of bank during the bank raid. An Atlanta book manager kindly consented to the use of book's interior by Cowart and his company for filming the robbery scenes and get-away scenes.

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'Metamorphosis' — Cine Thriller In 16mm Sound

Imaginative treatment and skillful photography enhance 16mm sound film production of Michigan college group.

By WILLIAM WEIGAND

FOR A REALLY heartening answer to those moaning the apathy and inactivity among cine amateurs in this country, one might take a look at the activity in Ann Arbor, Michigan. A group there, known as the Gothic Film Society, with limited experience in the field of serious cinematography and even less plentiful financial resources, have undertaken and recently completed a full length 16mm sound production of Franz Kafka's famous short story, *Metamorphosis*.

The finished production is not only interesting from the standpoint of what can be done on a shoestring budget, but also because the nature of the film called for a number of rather novel approaches to the photography.

The guiding spirit behind Gothic, William J. Hampton, is

"METAMORPHOSIS" concerns a man turned into a cockroach and the havoc experienced by himself and his family. To achieve a "bug's-eye" view of most of the action, the camera was mounted on a homemade three-wheel dolly.



CAMEO MAN Paul Mesinger partially confined as a giant cockroach, prepares to check a change of his body as seen by the insect. Directing the proceedings is William Hampton.



CAMERA OPERATOR Charles Elliott prepares the dolly-mounted 16mm master sound camera for a low angle shot. Actual sound was recorded on magnetic tape.



CAMERAMAN Menager is seen here taking leader of the film to see up a shot under guidance of director Hampton.



SHOTBY stage lay costume on Menager as Hampton directed movement of camera in shot about to be filmed.



TYPICAL of the close lighting in most of the pictures is this close of last shot and the mother of victim.

a trucking fellow at the University of Michigan who had already experimented with several brief features. Hampton went all out rounding up the talent needed for *Metamorphosis*. Paul Menager, his family dentist, and a Michigan chemist, was the first and most enthusiastic recruit. A long-time camera bug, Menager did almost all of the photography for the film. Entirely apart from any University of Michigan stipend, the society enlisted a group of semi-professional actors for the cast, secured a shooting script from a couple talented student writers, and got a complete original music score from a young composer at the university.

The story they wanted to tell was that of a young man who awakens one morning to find himself transformed into a piratical cockroach. Leaving none of his creature or human intelligence, the man's reaction to his family and their strange relation to him are part of the strong psychological impact of the story. As conceived by Hampton, the film was to capture the element of horror without losing the masterful, almost documentary, style of Kafka. In other words, although the story is in itself fantastic, the mood of the photography must be straightforward and at the same time, somehow distorted.

The situation to achieve that mood was needed particularly since the cockroach himself, with the exception of one brief moment, was not to appear on the screen. The limited budget made an artificial cockroach that was mobile and realistic practically impossible. Hampton therefore decided to employ a camera-eye technique in the manner of Robert Montgomery's *Lady in the Lake*. In this case, however, the eye of "the hero" is for the most part only about eighteen inches above the floor. The camera, hence, must move in this plane for most of the shots. In this manner, the wide angle of the perspective naturally creates a certain distortion without affecting the material reality of the objects photographed—a reality important to the documentary quality.

Also, by this technique, an audience identification with the human qualities of the insect are preserved. During the course of the picture, for example, the insect is injured several times, and his eyesight is affected. The camera was thereupon intentionally thrown out of focus for these sequences, forcibly recalling the human aspect behind the lens.

For the dialogue sequences, the Society was able to rent from the University a Mauer Meiss camera with synchron-

ous motor drive. Recording of sound was done with a Reeves sprocketed-tape recorder. A rubber-tired dolly was specially constructed on which the Mauer was mounted with the lens the required distance above the floor. Cameraman Menager lay on the dolly and did most of the actual photography in that position. Assistants moved the dolly from behind when the script called for the "cockroach" to move along the floor.

The construction of the dolly called for several revisions. At first, uneven wheels were attached to the axles to obtain an irregular rocking effect. The early rushes, however, proved that these shots were extreme and, despite their jarring results, were more likely to make an audience smirk than criticize them. The dolly was rebuilt and provided with a single wheel in back rather than two, and the movement scored with the three-wheeler proved just shaky enough to suggest a sideways motion without wreaking havoc on the stomachs of the audience.

It very soon became clear, however, that a solid diet of shots from the low, floor angle would grow increasingly monotonous for seventy-five minutes. Besides that, the script called for the cockroach to perform at other levels. In one place, for example, he is called upon to roll himself out of bed. Later, he must climb upon a chair to turn a doorknob in its lock. Finally, he crawls about on the walls and ceiling.

Undoubtedly, these could be camera effects. However, no eighty-pound professional camera could be managed in such gymnastics with the equipment available, so Menager decided to film these shots with a hand-held Bolex. The drawback, of course, was the capacity of the camera, since no more than a hundred feet of film could be shot at a time.

With care, however, Menager managed to finish each of his twenty-second runs either on a fast pass or on an anonymous action of the ceiling or door. This permitted him to reload and continue without perceptible effect in the projected print.

A transfer of camera in mid-scene was involved in one sequence. Menager was once called upon to move the "cockroach" from the floor to the seat of a chair, then reach toward a key to unlock a door. When the Mauer was focused on the dark chair seat, he quickly shifted to his Bolex and moved it easily to the lock. Here he abandoned the viewfinder and adjusting the focus by hand, pointed the camera in a nearby

(Continued on Page 586)

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CINEMATIC DATA ON DISCS

By JOSEPH AUTTENBERG, A.S.C.

FOR A LONG TIME, cameramen have yearned for a form of calculator, or slide rule, that would supply answers quickly to the several purely mathematical problems which confront him daily both in and out of the studio.

Such a need finally has been supplied in the Kelly Cine Calculator. Designed by W. B. Pollard and Skeris Kelly, British cameramen, the calculator is both accurate and capable of supplying answers to a great number of problems of the cinematographer.

The large amount of information carried on the calculator, its portability, and its clear scales in red and black, make it easily readable at a glance.

The calculator is virtually a slide-rule in disc form. Two rotatable plastic discs, about $\frac{1}{2}$ " in diameter, are mounted together by means of an eyelet in the middle. Printed on one side are scales giving the hyperfocal distance and depth of focus for seven lenses: 25, 35, 40, 50, 75 and 100 mm focal length. The range covered is from $1/2$ down to $1/13$ and from infinity down to 2 feet. These distances and apertures can be found quickly and easily by a twist of the outer disc. On the reverse side is another set of seven calibrations, as follows:

- (1) Film used per second, 16mm and 35mm in both metres and feet.
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Normally, all the information carried on the Kelly calculator would require something like forty pages of printed matter if set up in booklet form. In the compact slide-rule form, which easily fits pocket or briefcase, this new accessory is bound to find wide acceptance by cameramen everywhere.

Its accuracy is assured by the fact its designer also holds a B.A. degree in applied mathematics. Several cameramen nevertheless, have undertaken to



EXAMINING the new Kelly Cine Calculator, developed in England as an aid by cameramen, are Joseph Auttenberg, A.S.C., and his assistant, Ted Vignauder.

prove its accuracy themselves favorably. The Kelly calculator gave slightly different answers than those appearing in some reference books, but, on working through those particular calculations, it was found that the calculator was in every case correct.

I have already put the calculator to use many times and the benefits derived are sufficient to warrant passing the news of this new accessory around to others.

There is a 16mm version of the calculator for 16mm cameramen, too, and it seems to me it will do for him all that is claimed for it.

At present, the Kelly calculator is available only in England. It's priced at 2s. plus postage, which is roughly \$4.60. It is being distributed by the British Society of Cinematographers, 99 Shore St., London, S.W. 1, England.

"METAMORPHOSIS"

(Continued from Page 507)

complete turn to represent the cockroach's mouth turning the key in the lock. The ceiling and wall shots were taken from different heights on a ladder, or along a plank laid between two ladders.

The trickiest shot of all also remained for execution with the Bolet. Hampton, from the beginning, hoped to incorporate some visual evidence of the cockroach into the picture. That is, if the cockroach could once look down at his own body, the visual picture of it was bound to be worth a thousand words.

To achieve this a long latex leg was made and constructions sewed into it,

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It was inflated and crumpled on top to give the appearance of an insect's segmented body. The "legs" were fashioned from wire brushes tapered to a point and fastened to the body, so that they would quiver lightly at a touch.

Maigler, who is not very large himself, strapped the contrivance over his legs, lay down on a bed, and panned across the ceiling with the Rolux to represent the first moments of the insect's awakening. As the camera then comes downward, the "eyes" record the instant horror of what has happened to the body. The shot, of course, lasts only a few seconds, but the high glass on the body and the odd quivering of the legs prove doubly effective for the brevity of it.

Since all the scenes were interiors (the Society used two large rooms in an old Ann Arbor house), Hampton also decided to shoot two framing sequences in order to give the picture still more variety. That is, he would include an opening and closing scene (the former before the titles) which would be apart from the "insect's eye" technique employed the rest of the way. These would take full advantage of the usual privileges of the omniscient camera including close-ups.

The working hours of the Society added to the production problems. Be-

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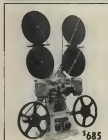


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close the house was on a busy street, sound shooting was confined to the quieter hours—late at night, or very early morning. Most of the windows had to be draped constantly to keep out the glare of a supermarket across the street, and use of arc lighting units was not permitted by the local power company because of the house's antiquated wiring system. The subdued shadows, the contrasting blacks and whites, however, added greatly to the mood of the picture. Natural morning light served well for some of the bedroom scenes.

Sound recording also was a problem. Although the rooms were soundproofed as much as possible by hanging sheets and blankets on the walls, the movement of the dolly often became audible on the sound track, and these scenes had to be re-shot. We found that certain sequences, which were scheduled to be shot with sound, could be done silent merely by keeping the heads of the actors above the top of the frame. That is, the camera, as the cockroach's eye, could be placed far enough beneath the bed to make the angle of shooting reach only to the actor's shoulders. The dialogue could then be recorded later with no need for lip synchronization. For those scenes that required lip-synch, the house-made blimp first used was found defective and a regular professionally-made blimp had to be rented.

Editing the film became the last crucial step in the campaign for real variety in the cinematography of *Metamorphosis*.

Metamorphosis in the story of a cockroach's existence could not be paralleled by monotony in the photography of a film version of this life. Consequently, where excessive scenes seemed too similar either in angle or lighting, they were spaced further apart in the final print (where the plot permitted). Occasionally, they were drastically cut in order to begin or end with some calculated effect. In one case, one hundred feet of film, mistakenly double exposed proved almost unbearably valuable for a kind of "summing up" or "memory" sequence near the end of the picture. Further footage was shot around this bit in order to point it up. Most of these changes from the original story line, as developed, increased the significance and added to the impact of the Kafka tale.

Metamorphosis will receive its world premiere in Ann Arbor sometime before the first of the year. Although William Hampton's experience with sound movie making has been confined to a single previous effort—a thirty-minute satire, which received friendly notices from Detroit critics—he, along with his associates in the Gothic Film Society, hopes this later feature-length production will serve as a stepping stone to bigger and better 16mm sound productions. If nothing else, it proves that a group of amateurs working collectively, and following professional procedure, can turn out worthwhile amateur films.

SCIENCE FILMS FOR SERMONS

(Continued from Page 486)

graph the creatures, plants, etc., that are the subjects of films in the *Sermons From Science* series.

The Moody film project had its beginning seven years ago when Dr. Moon, then a Los Angeles pastor and amateur movie maker, started making 16mm movies of natural wonders which he could use to illustrate his sermons. His home became a small film studio, and here he conducted some of his very first scientific filming experiments, such as photographing the growth of plants by interval microscopic photography. Then he made a detailed motion picture study of the life cycle of the Swallowtail butterfly, using the same methods and equipment. These and other subjects made up his first half-hour institute film, *God Of Creation*.

In the early days of the institute, necessity frequently became the mother of invention for Dr. Moon and his associates. Obligated to operate on a low budget, the film makers were constantly seeking ways of making a little of the

budget cash go a long way.

Whereas most instructional films begin with the preparation of a shooting script, Dr. Moon and his associates have found that, for their type of films, prepared shooting scripts are impractical. This is because when they start on a new *Sermons From Science* film, they never quite know what sequences can be secured and included in the narrative.

As individual scenes grow into sequences, these in turn are represented by a series of color sketches which are arranged in logical order on a storyboard at the studio, a practice established in the production of animated cartoons. The storyboard provides an excellent outline for story conferences and enables the production staff to visualize the development of the story line.

Whenever the camera crew is out on a filming expedition, the project has a two-fold aim, to secure the shots planned for and also to photograph any subject matter which might be used in

a future production. Sometimes, when shooting "on location," Dr. Moon or one of his cameramen will stumble on to some unusual creature or plant having a basic idea for another science film subject. The initial shots, when studied on the screen, serve in developing a complete new subject. In one instance, when the company was on the desert shooting scenes for the life-cycle of the Gila monster, an opportunity to shoot a number of studies of rattlesnakes presented itself. This footage has since been catalogued and stored for future use. Members of Dr. Moon's staff have been trained to observe the world about them when out on location, and to recognize and film objects having potential value for the type of films which the Institute is dedicated to produce. The valuable stock shot library which has been built up as a result of this practice contains thousands of feet of natural history and science subjects in 16mm color.

The *Serious From Science* series has been filmed under conditions that often would have discouraged many professional film producers. Most of the features have been made on a budget of \$30,000 or less and with a staff of a dozen workers, all of whom share Dr. Moon's enthusiasm for the work. Where professional equipment has been lacking, the company improvised or adapted existing equipment to their needs. Once, when an animation crane was required, the films to twenty thousand dollars needed for a standard professional model was not available; so the Institute's staff built one, using two machine lathes and other miscellaneous parts.

Much of the Institute's electrical equipment, including the power generators, are adaptations of war surplus equipment. It is estimated that cameras and other film production equipment now owned by the Institute has a value well over \$100,000.00.

A great many of the Institute's most interesting subjects have been made by time-lapse photography, much of it highly magnified. For this, automatic timing devices are employed which are so synchronized that when single-retention exposures are to be made, the object is lighted momentarily by stroboscopic light. This method, instead of the conventional photolamp illumination, has been found more successful in the photography of insects and other living creatures. The short-interval illumination creates no disturbing heat and thus does not cause abnormal reaction in otherwise natural action of the insect subjects. It has been possible to successfully photograph some subjects with this light at 64 frames per second, using an exposure of F/22.

Among the interesting time-lapse studies observed in course of filming at the Institute studio was that of the life



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of the trap door spider. The spider and his subterranean home had been moved instant from a distant field and into the studio. Here cameras and lights were trained upon it to record action that showed in extreme closeup how the spider emerges from and re-enters his quarters. For those who are not familiar with a trap door spider's nest, it consists of a hole in the earth about an inch in diameter. Over this is a cleverly designed earthen lid which the spider fashions from mud. The lid is hinged to the nest opening by a web of fine silken threads. To emerge, the spider merely applies pressure to the door and exits. On re-entering, he lifts the door with his feet, and it closes behind him. So cleverly is the earthen lid designed that, when closed, it is difficult to distinguish from the surrounding ground.

In order to capture the spider emerging from the door of the nest photographed on the stage, the trap door was wired to trip an electric switch that turned on the photoclamps at either side of the camera, at the same time setting the camera in motion, also. The camera continued exposing film until the spider reentered his trap. When the door was closed, contact with the lights and cam-

era switches were automatically cut turning off both.

The Institute does all its own sound recording. Adjacent to the main photographing studio is the recording room. Here is a battery of four Stencil-Bellman magnetic recorders. As most of the recording consists of narration—usually by Dr. Moon himself—the recording arrangement is similar to that found in most sound recording studios. Facing the control room, Dr. Moon observes the film being projected onto a small translucent screen. Thus, without turning away from the screen, he can follow directions of his sound engineer.

As a result of the wide acclaim given the *Sermons From Science* films, the Moody Institute plans to increase its staff in order to step up production from one feature film per year to four. This means considerable expansion of its present studios—perhaps newer and larger quarters. Still another project which forces the Institute to plan on enlarging its studios is the demand for film strips to augment its films. Already these are being produced by an interesting method whereby 16mm frames of the original film are blown up to 35mm—the accepted standard for film strips.

EDS.

DOUBLE EXPOSURE

(Continued from Page 69)

methods of photography.

"I am of the 'hard light' school, that is, all light on the set is balanced to the color temperature of daylight and all incandescent units are used in conjunction with the Mollith filter. That's unorthodox. Most cameramen, including Rudy, use yellow incandescent lighting for interiors and blue for daylight. However, I believe that my theory gives more brilliance to the setting because it filters out the red, and I have

found that method best for me.

Says Maltz: "I was very pleased when I learned that Buddy was to be my director of photography. It always has been my belief that the selection of first cameramen should be just as important to a director as story and cast. He can either make or ruin a picture. In the motion picture, it's a means of self-expression equal to the other arts. Now, as a director, I find that my experience as a cameraman is of inestimable help.

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CHARLES E. PERCY, president of Bell and Howell Company, (left) with movie of Simon Simon, (right) of MGN's "Island of Mystery" with one of the first professional movie cameras built for Hollywood in 1907 by Bell and Howell. The machine was the predecessor of the Bellows of Motion Picture Art Director award in Bell and Howell for outstanding design in their new "100" 16mm magnetic head motor movie camera.

It adds me in making schedules, estimating costs, even in selecting a cast."

To all that, Lawton is in full accord. Instead of any temperamental clashes with his director he found that his entire work was simplified.

"Some directors just don't know what a cameraman is up against," he says. "That, of course, is understandable. They've never done it themselves. The toughest director to work with on that score are those fresh from the legitimate stage. Everything is different for them. I remember once when such a director told me, 'I want this scene to be very dark. Have the characters barely visible.' That's the way I lighted it. Then he told me, 'No' . . . No! That's far too much light.' I tried to explain to him that if I cut down any more, nothing would appear on the film but he insisted. When he saw it in the dailies, he apologized and from then on believed my technical skill was better than his. But the scene had to be re-shot which cost time and money. Still, directors aren't the only ones who have been guilty of this, either."

One reason why Main and Lawton proved to be such a cooperative team during the filming of *Paula* was the fact that they had many conferences before a camera was turned.

"Cameramen are all perfectionists," says Rudy. "Before I stepped on the stage, Buddy and I plotted all our scenes. That made for fewer delays and less snap decisions to make on the set. Right from the start, we were in perfect accord about how the camera and lighting should express the mood of this harrow and emotional drama."

"The lighting for *Paula* presented a problem. A great part of it was filmed in apartments which instead of high walls and no ceilings, had ceilings and walls just like any ordinary room. Contrasting with this, there was our location in the General Petroleum Building which had very high walls and ceilings. Lighting in both entrances had to be done from the stage floor without the aid of lights on a catwalk above."

Although Lawton recognizes that these were serious hurdles to overcome, he says that this film has been the most enjoyable picture he ever has photographed and gives credit to Main.

"Rudy never once interfered with my work," he says, "like so many other directors are wont to do. The whole camera crew agrees that he's wonderful to work for. Take Frank Carson, my operator. It's easy to make a buff on a complicated dolly shot. Just like an actor poots up on a line. So, of course, Frank eventually made one. When an operator does that, I've heard many other directors get very sore. Not Rudy. He knows how easy it is to make such

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a mistake. He's done it himself. He just smiled at Frank and we made another take just as though it had been the star's fault."

Another reason why Lawton found it so congenial to work with this cameraman is the fact that the director knew immediately what Buddy meant when he had a suggestion.

"Many directors," says Lawton, "just can't seem to get what a cameraman means. And you don't have to be too technical in your talk either. Again if they think you are taking too much time with your camera set-ups, they'll get very impatient. I had none of that with Rudy."

Often, too, Lawton confesses, he has worked with directors who plot the action of their scenes without consulting their cameramen first. They get complicated shots which require the operator to maneuver into all kinds of contortions and be more of a peacock than a man. They overwork the idea of pictorial effects that the cameraman knows are wrong. But after all, the director is the director and has the final say.

"Rudy never saw complicated movements just for the sake of a movement," says Lawton. "He knows that a great part of the time this will come out on the screen as a jumble, that is unless and movement has a purpose and a sound reason behind it. If he makes a dolly shot following an actor, the dolly stops when the actor does. This means naturalness. Audiences are never aware of the camera. They are actually seeing life, not a picture of life obviously photographed."

"Many directors, too," says Lawton, "don't seem to know or even suspect that some stars photograph better showing the left side of their face. Rudy

reprograms that just by looking at them. He therefore prepares the action of his scene with that in mind. He doesn't have to wait for his cameraman to come to him on the set and tell him which side of the face a star should expose to the lens, and then have to reconstruct all his action."

More, he adds, has the keenest sense of texture, composition, lighting and color values of any director with whom he ever has worked.

As a matter of fact, the threat all during the filming of *Passia* was not that temperaments would clash but that these two would develop into a mutual admiration society. To which eventually, every member of the cast and crew joined in a hearty and honest, "More power to them."

PRIZE-WINNING FILM

(Continued from Page 101)

tough, but they don't gamble whiskey, and the gun men and her boy friend don't kiss each other once. Cowart said it didn't even occur to him to plan a love scene for the picture. "When a movie is only 20 minutes long," he explained, "you have to leave out insignificant details." Some Hollywood producers should listen to him.

The story has to do with a gang of young punks who rob a bank in broad daylight, pass the loot to a girl accomplice as they hurriedly exit from the bank, intending to rendezvous at an old shack on the edge of town and split the money between them. But the girl and her accomplice double cross the robbers. King Baskin and his pals set out in search of the pair, locate the



Current Assignments of A.S.C. Members



Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

★ ★ ★ ★

★ ★ ★ ★

Columbia

- **JURGENE WALKER**, "The Mating Kind," with Judy Garland, George Cukor, director.
- **PATRIC BROWN**, "Lovers of the Moon," with Charles Scott and Sander Baronas, Ray Nazarro, director.
- **WILLIAM BRADFORD**, "Apricot County," (Gene Autry Prod.), with Gene Autry, George Archainault, director.
- **CHARLES LAWTON, JR.**, "The Saker and the Arrow," with Frederick Coudard and Barbara Hale, Andre de Toth, director.
- **PATRIC BROWN**, "Rough, Tough, Wild," with Charles Starrett, Sander Baronas, Ray Nazarro, director.

Independent

- **ERNEST LARSEN**, "The Lady Is The Iron Maid," (Color) with Louis Hayward, Pat Medaris, Ralph Morgan, director.
- **ERNEST HALPER**, "Marathon," (Film Group, Inc., Prod.) (Color) with Linda Thelen, Diana Douglas, George Nader, Rodney Aarons, director.
- **JOSEPH RICE**, "Red Planet," with Andrea King and Peter George, Harry Brown, director.
- **ELVIS W. CARTER**, "Owlhoot Women," with Marie Windsor and Richard Haber, Sam Newfield, director.

M-G-M

- **CHARLES ROSSER**, "Sonsbeards," with Stewart Granger, Eleanor Parker, George Seaton, director.
- **WILLIAM MILLER**, "Slither Alley," with Esther Williams, Jack Evans, Sidney Lanfield, director.
- **ROBERT SCOTT**, "The Merry Widow," (Technicolor) with Lilli Truitt, Curtis Bernhardt, director.
- **GEORGE FISKE**, "Lovers To Look At," with Kathryn Grayson, Red Skelton, Morris Lehay, director.
- **PAUL VOGEL**, "The Girl Is Mine," with Jane Bryan, Arthur Kennedy, Mildred Davis, Guy Marshall, John Sturgis, director.
- **WILLIAM DAVIES**, "Gloria Alley," with Leslie Caron, Ralph Meeker, Gilbert Roland, Richard Widmark, director.

Monogram

- **WILLIAM SEIDMAN**, "Starlight Canyon," with Wayne Morris and Anthony Quinn, George Blais, director.
- **ERNEST MILLER**, "Waco," with Wild Bill Elliott, Pamela Blake, Lyle Talbot, Lewis Allen, director.
- **ERNEST MILLER**, "Man From Black Hills," with Johnny Mack Brown, Florence Lake, Thomas Carr, director.

Paramount

- **LEONARD W. LONDON**, "This Is Dynamite," with William Holden, Alene Smith and Edmund O'Brien, William Dieterle, director.
- **CHARLES LANG**, "Los Alamos," with Gene Barry, Lydia Clark, Nancy Goetz, Tony Hupat, director.
- **GEORGE HANES**, "Frenchie," (Color) with Bing Crosby, Jean YVES, Edith Barrymore, Elliot Nugent, director.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

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- **REYNOLD HARLAN**, "The Big Sky," with Kirk Douglas, Howard Hawks, director.
- **WILLIAM STYLER**, "The Korean Story," with Robert Mitchum, Tay Garnett, director.
- **ELBERT STRUBLING**, "Andros and The Lion," with Jean Simmons, Victor Matur, Chester Erskine, director.
- **KARL SEIDMAN**, "Ladies The Hand," with Lee Remick, Dorothy Hart, Cyril Rindfield.
- **NICK MORGENTHAU**, "Clash By Night," (Wild Screen) with Barbara Stanwyck, Paul Douglas and Robert Ryan, Fritz Lang, director.

20th Century Fox

- **ANTHONY R. ARLING**, "The I Don't Care Girl," (Color) with Mimi Gurnea, David Wayne, and Grant Tinker, Lloyd Bacon, director.
- **HARRY JACKSON**, "Way Of A Gunster," (Shooting in Argentina, in color) with Gene Tierney, Rory Calhoun, Richard Boone, Philip Dunne, director.

- **LEONARD ELLMAN**, "Diplomatic Courier," with Thelma Power and Patricia Neal, Harry Hathaway, director.
- **LEON SEABURY**, "The Girl Next Door," (Color) with Jeanette Hodge, Dan Dorey, Frances Day and Billy Gray, Richard Sale, director.
- **JOSEPH LAURELL**, "Outside Of Poker Flat," with Anne Baxter, Dale Robertson, Melvyn Frank, Carmen Mitchell, Barbara Bates, Craig Hill, Joseph Newman, director.
- **EDWARD CRONIN**, "City Of The Swamp," (Color) with Jean Peters, Jeffrey Hunter, Constantine Scott, Walter Brennan, Jean Negroni, director.
- **MILTON KRAMER**, "Deadline—U.S.A.," with Humphrey Bogart, Edith Barrymore, Kim Hunter, Joseph De Santis, Paul Stewart, Warren Stevens, Ed Dagley, Richard Brooks, director.
- **JOSEPH McDONALD**, "Gli Of The Mops," with Jeanne Crain, and Foster George Bryant King, director.

Universal-International

- **CLIFF SMITH**, "Oh Money, Money," (Color) with Charles Coburn, Faye Dunaway, Gipsy Faye, and Rock Hudson, Douglas Sirk, director.
- **JOSEPH GORDON**, "Dear No Evil," with Tom Curtis, Jan Sterling, and Nina Foch, Joseph Pevney, director.
- **GEORGE ROSSER**, "His And His Kettle Go To Paris," with Margaret Murn, Percy Kilbride, Ray Collins, and Lee Nelson, Charles Lamont, director.
- **MURRY GORMAN**, "Bad Girl Kismet," with Jeff Chandler, Alan Reed, Charles Drake, Susan Collins, Hugh O'Brian, John Hodge, Budd Boetticher, director.
- **STANLEY SMITH**, "Scandal Sheet," (Color) with Thomas McCall, Rock Hudson, Richard Widmark, Bobbi Miller, Amanda Blake, Winfield Cameron, Robert Siskow, director.
- **LEONARD ELLMAN**, "Calvin Jumpers," (Color) with Audie Murphy, Faith Domergue, Steve McQuay, Eugene Iglesias, Gerald Mohr, Dan Sarg, director.
- **CHARLES COHEN**, "Horsehair," (Color) with Joseph Cotten, Shirley Waters, Betty Hutton, Susan Bell, Antonio Moreno, Katherine Emery, Hugh Ferguson, director.

Warner Brothers

- **WILLIAM CLINE**, "She's Working Her Way Through College," with Virginia Mayo, Randolph Scott, Bruce Henderson, director.
- **THE MCGRAW**, "The Women Is Dangerous," with Jean Crawford, Felix Fenn, director.
- **WALTER LUTCH**, "Romeo Roll," with Frank Leeper, Richard Carlson, Joseph Lewis, director.
- **JOHN SMITH**, "San Francisco Story," (Fidelity Prod.) with Joel McCrea, Yvonne DeCarlo, Sidney Blackman and Ondine Stevens, Robert Parrish, director.
- **ROBERT ROSS**, "Mama Mama," with Evelyn Fyfe, Ruth Roman, Paul Petersen, Richard Widmark, Raymond Burr, Don Seymour, Gordon Douglas, director.

MOVIES ON TAPE

(Continued from Page 590)

vision, believe their development is the forerunner of filmless portable motion picture cameras of the future, even though their laboratory pilot model is too bulky and unwieldy for general studio use.

Their new "camera" is the culmination of two years of research and development. Actually, it does not "take a picture" in the sense of photography. Instead, it utilizes a television camera as its "eye" and through a complicated electronics system, transfers the electronic impulses to magnetic tape, which can be played and re-played indefinitely with no loss in image or sound quality.

In the demonstration for newsmen, the motion pictures recorded magnetically were run off from an ordinary roll of tape continuously used in magnetic sound recording, and manufactured by Minnesota Mining and Manufacturing Company.

As the tape passed a tiny magnetic removing "eraser" no larger than a half dollar, recognizable images of men and women and airplanes appeared on the screen of a television set, to which the pickup-projecting unit was connected by wire.

Mullin and Johnson believe their development of a filmless camera foreshadows a great change in modern motion picture production technique, because the cost of tape is one-tenth that of film, and the new method eliminates all need of the costly and time-consuming processing of photographic film. The magnetic tape, on which the images and sound are recorded, requires no processing and may be played back immediately.

Some motion picture directors see tremendous advantages in the new method. For instance, just as it is now possible to immediately play back a magnetic sound recording and to erase and re-record it in the event it is not perfect, it would be possible to play back the picture for an immediate check as to quality of its visual content.

The savings in film and laboratory costs would be an important factor. As one prominent Hollywood engineer pointed out, the system would be a tremendous boon to the industry because of the re-use feature of the tape alone; and then there is the further simplicity the system affords of making fades, dissolves and transition effects without need of optical printers and special effects equipment. Still another important factor is the elimination of a great deal of if not all sound dubbing.

Of course, the system is not yet so

(Continued on Page 591)

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MOVIES ON TAPE

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the stage when any clean-cut method of operation within the studio has been put on paper; but it would probably work something like this: an entire production would be shot in consecutive order on a single tape, edited and corrected as the production progressed, or the various takes would be recorded, much the same as they are now, then later re-recorded on the master. From the master, "dope prints" would be made either by straight contact magnetic duplicating methods or by re-recording, and these dopes would go to the master projecting centers to be telecast to theaters.

The cameraman would function just about as he does at present, except that he'd forget about his camera lens; there wouldn't be an optical lens on the new "camera." The picture he'd be shooting would be seen simultaneously on a closed-circuit monitoring tube, which would be an integral part of the camera, similar to the electronic viewfinders on present-day TV cameras. Set lighting would be essentially the same as it is today.

Mullin and Johnson and Bing Crosby Enterprises are not the only ones working on developing a practical system of recording motion pictures on magnetic tape. It just happened that they are the first to demonstrate it publicly in Hollywood. Loren L. Ryder at Paramount, Radio Corporation of America, Armour Research Foundation, Beach, Bell Telephone Laboratories, and Minnesota Mining and Manufacturing Co., just to

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name a few, also are reported working on the project for some time and probably have reached the same stage of development with their systems as the Crosby engineers.

Some Hollywood engineers feel that the present Crosby system is not too well adapted yet to practical feature film production because of the frequency range which the system is presently using; also because of the high rate of linear speed which the tape must travel. However, the Crosby engineers already are at work on a complete new model of their "electronic camera" which reportedly will surpass in result that already demonstrated by the camera which they exhibited in the demonstration last month.

The actual manufacture and general demonstration of the new Crosby system will be deferred for at least six months, during which time it will be standardized for use with a new one-inch magnetic tape. This tape, the developers claim, will be more receptive to all color methods with a definition increase brought about through use of added magnetic power. As the Crosby organization now sees it, the new recording system will be farmed out for manufacture, with the company handling distribution.

PUTTING THE PICTURE ON PAPER

(Continued from Page 497)

in sharp conflict with other people as truly perceived as he is, you may have a great picture.

We never work much preparing long treatments, believing that a comprehensive treatment saps some of the vitality from an idea. That is, if you do it yourself. Over, however, Wilder and I were given a 40-page sketch called "Memo To A Movie Producer." It had no plot whatever, but presented a background brilliantly—a little town the other side of the Mexican border where refugees from Europe were to get into the United States. It grew into *Hold Back The Dawn*.

Mostly, we've developed our own ideas. For instance, one scene I'd heard about developed into *To Each His Own*. It showed a middle-aged woman walking down a stalling platform where a troop train was pouring young American soldiers into London. She was calling the name of one of them—uncertain whether she would recognize his face. He was the son she had given up when he was a little boy.

Sunset Boulevard came about because Wilder, Menchen and I were acutely conscious of the fact that we lived in a



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town which had been swept by a social change as profound as that brought about in the old South by the Civil War. Overnight, the coming of sound had brushed gods and goddesses into obscurity. We had an idea of a young man happening into a great house where one of these ex-goddesses survived.

At first we saw her as a kind of horror woman—an embodiment of vanity and selfishness. But Wilder, as a director, has an uncomfortable peculiarity: he likes to see characters as they are going to be on the screen before he finalizes a script. I think we started *Sunset* with sixty completed pages. As we went along, our sympathies became deeply involved with the woman who had been given the brush by thirty million fans. At the end, we had to give her the only happiness we could see for her—the twilight happiness of the mad.

Of course, if you are working from a play or novel, a great deal of explanatory work has been done for you. The earliest script I ever worked on—the one that took the shortest time—was *The Lost Week End*. In his novel, Charles Jackson had provided us with a tragic protagonist—a man in love against his will, in love with a bomb. He had also set the pattern of the seven circles of hell through which each a man can pass in a brief time. It was a question of effectively dramatizing those seven circles, of finding the probable opponents of that desire of Don Quixote for drink.

After this length of time I'd have to take a copy of the book and the script and compare them, to say what was Charles Jackson's and what was ours. The battle in the chandelier was ours, I know. The delusion Don Bismarck suf-

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fered—the hideous fight between the mouse and the bat—was his. Whether the voice of Don begging the prostitute for money for drink was even indicated by the novel, I can't say.

I devoutly wish more people would write novels alive with truth and pity. So do all motion picture producers. Alas, they are rare indeed.

The medium of the motion pictures imposes on its practitioners a more abstruse obligation to hold the audience's interest than any other medium. The novelist can end his chapter, the playwright can drop his curtain. The motion picture writer is on for an hour and a half or two hours.

What he writes must be playable. It must be believable, it must have variety. You can't photograph people with the same expression on their faces the whole time. It must have architecture—a beginning, a middle, and an end. Above all, it must move, must take advantage of the freedom of the camera. The best play photographed just as it was written, seems stagnant.

Finally, it must have some of the freshness and unexpected quality of life, not be a rehash of old celluloid.

It's up to the producer to see that these things are in the script. No wonder he sometimes finds himself a little weary at the end of the day.

FILMING THE CIRCUS

(Continued from Page 49)

problem of keeping the camera from interfering with spectators' view of the circus," said Barnes. "Most of the time the camera was mounted on a giant Chapman crane fitted with a 30-foot extension. Where possible, we kept the chassis of the crane in one of the exit areas around the circus and, with the boom raised high, we shot from practically any vantage point we desired. So carefully was camera operation planned and executed during the regular show takes, that we never once received a complaint from the circus management."

The tremendous controversy made Paramount by the circus was respected in part by DeMille's decision to employ a second camera unit to supplement Barnes' crew. Directed by Everett Mackay, A.S.C., the second unit usually covered important action from another angle, making it unnecessary to slow up schedules by getting such shots in a subsequent setup, as would have been necessary with one camera on the scene.

After the company had concluded its initial seven weeks' shooting at Sarasota, it returned to Hollywood where scenes were shot that did not demand the actual circus locale. Months later,

the company rejoined the circus in New York and traveled with it to Philadelphia, and Washington, D. C. The lighting and camera techniques which had been developed during the filming at Sarasota worked equally effective when shooting with the circus on the road. However, the company was put to a greater test because it became necessary to integrate its work with that of the circus crew, striking and packing its equipment at the end of a show, and unpacking and erecting it when the circus reached its new destination.

With all the preparations made by the studio and with Technicolor coming through with its new low level color film, George Barnes relates he spent many anxious hours awaiting the first dailies from Hollywood. But his apprehension was quickly allayed by the first day's rushes, which were screened in a local theatre in Sarasota. On the road, dailies were usually screened in some local theatre, following advance arrangements made by the studio. Thus it was possible to keep in just as close touch with the photographic results as when working at the studio in Hollywood.

During all shooting, Cecil DeMille was at George Barnes' side. He became virtually the circus' fourth ring—a relentless, tireless figure, constantly on the move in the steaming heat of the big top. Daily during the circus shooting, he could be seen peering through the camera viewfinder with the savage determination of an errand boy on the search for melodramatic clues. In getting these ideas on composition, he became an object of considerable wonderment to spectators.

We leave it to the picture itself to prove how superbly DeMille and cameramen Barnes worked together to catch the very soul of the circus on celluloid; how completely unified must have been their thinking to create the finest pictorial rendition of the circus ever to be brought to the motion picture screen.

PRIZE-WINNING FILM

(Continued from Page 51)

toward a career in photography ever since. If the Army doesn't get him, John hopes to have his newest film completed and ready to enter in American Cinematographer's 1952 competition which begins December 1st.

NOTE: American Cinematographer is included in the *Atlanta Journal and Constitution Magazine* and in *New Olive Bell Daily* for their permission to draw upon facts and statements contained in Miss Davis' article (which appeared in the July 6, 1951, issue of that publication) describing the filming of *King of the Ring*.—EDITH G.

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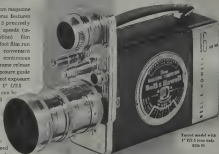


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